

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A [hybridization] DNA probe consisting of a first region having a sequence which is complementary to a target nucleotide sequence and a second region, following the first region, having a sequence comprising ~~one or more nucleotides or nucleotide derivatives selected from the group consisting of labeled nucleotides, labeled nucleotide derivatives, unlabeled nucleotides and unlabeled nucleotide derivatives, wherein the second region has a sequence that:~~

a) ~~comprises~~ at least one inosinic acid nucleotide or nucleotide derivative thereof having weaker affinity of hydrogen bonding in base pairing with bases of the target nucleotide sequence when compared with that of hydrogen bonding in an a/t pair, in an a/u pair, or in a g/c pair; and

b) ~~comprises~~ either or both of at least one labeled nucleotide and at least one labeled nucleotide ~~derivatives~~ derivative, wherein the labeled nucleotide or labeled nucleotide derivative is selected from the group consisting of labeled adenylic acid, labeled thymidylic acid, labeled cytidylic acid, labeled guanylic acid, labeled uridylic acid, labeled inosinic acid and derivatives thereof; and

e) ~~is and being~~ incapable of hybridizing under stringent conditions to any nucleotide sequence of the target nucleotide sequence, wherein said stringent conditions are 6 x SSC, 0.5% sodium dodecyl sulfate, and 5 x Denhardt's reagent, pH is 7.0 at 68°C.

2-10. (Canceled)

11. (Currently Amended) A kit for synthesizing a [hybridization] DNA probe, the kit comprising terminal transferase and:

i) at least one of: unlabeled deoxyinosine 5'-triphosphate, labeled deoxyinosine 5'-triphosphate, unlabeled deoxyinosine 5'-triphosphate derivative and labeled deoxyinosine 5'-triphosphate derivatives;

ii) unlabeled nucleotides and/or unlabeled nucleotide derivatives; and

iii) labeled nucleotides and/or labeled nucleotide derivatives,

~~wherein at least one nucleotide or nucleotide derivative has weaker affinity of hydrogen bonding in base pairing when compared with those of hydrogen bonding in an a/t pair, in an a/u pair, or in a g/c pair~~ said nucleotides or nucleotide derivatives are selected from the group consisting of deoxyadenosine 5'-triphosphate, deoxythymidine 5'-triphosphate, deoxycytidine 5'-triphosphate, deoxyguanosine 5'-triphosphate, deoxyuridine 5'-triphosphate, deoxyinosine 5'-triphosphate and derivatives thereof.

12-14. (Canceled)